

### **REMARKS**

Claim 32 was amended. Claims 10-41 remain pending in this application.

#### **Claim Objections**

Claim 32 was objected to because of informalities. Applicant has amended claim 32 per the Examiner's suggestion and requests that the objection be withdrawn. It is believed that the amendment does not narrow the subject matter of claim 32.

#### **§102 Rejection of the Claims**

Claims 38-41 were rejected under 35 USC § 102(b) as being anticipated by Grubisch et al. (U.S. Patent No. 5,581,115, "Grubisch"). Applicant respectfully traverses the rejection.

##### *Concerning claims 38 and 40:*

Applicant is unable to find in the cited portions of Grubisch, among other things, means for minimizing carrier injection from the periphery of the emitter region to the collector region at high current operation of the transistor, as recited in claim 38.

Also, Applicant is unable to find in the cited portions of Grubisch, among other things, means for minimizing base-collector capacitance and maximizing high current operation, as recited in claim 40.

##### *Concerning claims 39 and 41:*

Claims 39 and 41 recite, among other things, the implant region having an implant surface area greater than a surface area of the emitter and less than a surface area of the base. However, while FIG. 5A of Grubisch shows the widths of the emitter and collector zone being nearly equal if not equal, FIG. 5B clearly shows the length of the emitter is longer than the collector zone. Thus the length times width surface area of the emitter in Grubisch is greater than the surface area of the collector zone.

Further, the Office Action admits that, Grubisch does not expressly disclose the top surface area of [collector] region 88 is greater than that of the emitter. See ¶ 5 of the Office Action.

Applicant respectfully requests reconsideration and allowance of claims 38-41.

**§103 Rejection of the Claims**

Claims 10-37 were rejected under 35 USC § 103(a) as being unpatentable over Grubisch. Applicant respectfully traverses the rejection.

*Claims 10, 13, 16-20, 23, 25-30 and 32-37:*

In rejecting claims 10, 13, 16-20, 23, 25-30 and 32-37, the Office Action stated that,

Although Grubisch does not expressly disclose the top surface area of region 88 is greater than that of the emitter, it would have been obvious to one of ordinary skill in the art at the time of the invention to change the top surface area of the region 88, since such a modification would have involved a change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

See Office Action ¶ 5.

First, Applicant respectfully disagrees that the subject matter of the claims is a mere change in a size of a component. While the result is a change in a size, the subject matter includes changing the proportionality of several areas in relation to each other.

Second, *In re Rose* holds that limitations relating to changing a size of a package [of lumber] were not sufficient to patentably distinguish over the prior art. See M.P.E.P. § 2144.04 (IV)(A). Applicant respectfully submits that the present subject matter recites more than a change in package size.

Also, in *Gardner v. Tec Systems, Inc.*, the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. See M.P.E.P. § 2144.04(IV)(A). Applicant submits that the subject matter recited in the present application performs differently over Grubisch because it results in improved high current and high frequency operation. See page 2 lines 9-13, page 4 lines 12-18 and page 5 lines 18-23 of the present application.

Further, because the Office Action admits that Grubisch does not expressly disclose the element of the top surface area of region 88 being greater than that of the emitter, it appears that the Office Action is taking official notice of the missing element. If so, Applicant requests the Examiner provide references in support of this position.

*Claims 11, 12, 14, 15, 21, 22, 24 and 31:*

Claims 11 and 12 depend on base claim 10, claims 14 and 15 depend on base claim 13, claims 21, 22 and 24 depend on base claim 17, and claim 31 depends on base claim 30. Claims 11, 12, 14, 15, 21, 22, 24 and 31 are believed to be allowable at least for the reasons stated previously for their respective base claims, namely claims 10, 13, 17 and 30.

Applicant respectfully requests reconsideration and allowance of claims 10, 13, 16-20, 23, 25-30 and 32-37.

**Product by Process Limitations**

The Office Action indicated that, while not objectionable, product by process limitations in claims drawn to a structure are directed to the product, per se, no matter how actually made. Thus, no patentable weight will be given to those process steps which do not add structural limitations to the final product. For example, in claims 36 and 37, the implant regions being simultaneously formed by an angled implant, or by the same source, are considered methods of forming those regions and not limitations of the final product. Therefore, such limitations are given no patentable weight.

Claim 36 recites, among other things, areas of the first implant region and the second implant region are greater than areas of the openings through which the first implant region and the second implant region are formed. Applicant submits that this feature is indeed structural in nature.

**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

Respectfully submitted,

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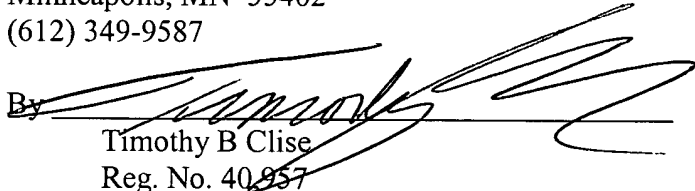
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Date

10 Nov '03

By

  
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10 day of November, 2003.

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